



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1127GA-JM  
UNIQUE ID NUMBER: 18PW121  
COMBUSTOR: TALON X  
ENGINE TYPE: TF

BYPASS RATIO: 12.3  
PRESSURE RATIO ( $\pi_{00}$ ): 31.7  
RATED THRUST ( $F_{00}$ ) (kN): 120.4

REGULATORY DATA \*\* DATA SUPERSEDED \*\* SEE FOLLOWING UID FOR REVISED DATA: 01P18PW152

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	0.6	35.1	27.3	14.8
AS % OF ORIGINAL LIMIT	3.1	30.0	26.0	66.0
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			33.0	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			39.0	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			44.0	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			51.0	

### DATA STATUS

- PRE-REGULATION  
x CERTIFICATION  
- REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
x DEDICATED ENGINES TO PRODUCTION STANDARD  
- OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
(ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
- OUT OF PRODUCTION (DATE: - )  
- OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	0.800	0.02	0.22	18.82	13.4
CLIMB OUT	85	2.2	0.670	0.04	0.30	15.30	10.5
APPROACH	30	4.0	0.232	0.02	5.36	9.07	0.5
IDLE	7	26.0	0.080	0.43	27.93	4.84	1.2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			303	59	3819	3096	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				9	9	9	9
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				0.5	32.4	25.3	13.4
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW)  
STAGE BLEED 0 (% CORE FLOW)

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.6-101.7
TEMPERATURE (K)	265.6-278.2
ABS HUMIDITY (kg/kg)	0.00071-0.00203

### FUEL

SPEC	Jet A
H/C	1.86
AROM (%)	15.1-16.6

MANUFACTURER: Pratt & Whitney  
TEST ORGANIZATION: Pratt & Whitney  
TEST LOCATION: X8 Test Stand, East Hartford, CT  
TEST DATES: 11/03/2014-14/03/2014

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

### REMARKS

1. Data from Certification Report PWA-11521, 3 engines tested, block C combustor
2. Certification in accordance with Part III, Chapter 2, of Amendment 8 of ICAO Annex 16 Vol. II.
3. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)